



S. A. S. M. E. E. Bulletin

**SOUTH AUSTRALIAN SOCIETY OF MODEL
& EXPERIMENTAL ENGINEERS**

RETURN THIS BOOK PROMPTLY TO LIBRARY

1927 ~ 2004

**THE OFFICIAL JOURNAL OF
THE SOUTH AUSTRALIAN SOCIETY OF
MODEL & EXPERIMENTAL ENGINEERS INC**

JUNE 2004

ISSN/0155/3700

CLUB JOTTINGS

by SMOKEY

Boy were we lucky! If there had not been a three week break between run days we would have copped the 44 degree scorcher of Saturday 14th February. Would we have still opened? this a question that will always remained unanswered.

The PFD on Saturday 21st February was a complete contrast --- 23 degrees, cloudy and mild with drizzle most of the afternoon. Being the first day out of a 15 day heat wave most people would have not minded, in fact several birthday parties came quite prepared for damp weather with brollies, free standing umbrellas, small tents, plastic covering tied between trees and even a small marquee. There were lots of children to contend with [no misbehaviour to note] and this surely kept John Lewis busy on the gate in co-ordinating all of the names on the birthday party notices. Good work John.

As the birthday parties were self reliant the canteen staff of Marg. Lewis, Dorothy Ambler and Kristine and Janelle Templeman had a rather easy time.

The boiler house boys were overjoyed with their new toy, or to be more exact, a reconditioned one namely the boiler. Ralph Ollerenshaw claims that steaming up time is now far less, with less firing required [we`d be dissappointed if this was`nt the case]. Full marks to the boys who carried out the refurbishment, it now means that the boiler has an assured life. Much whistle blowign heralded the boiler`s return to service. Equally happy were the boat boys as the pond has returned to its former slendor and hopefully it will stay this way. Boats were run by John Beal, Norm Kernick and Bob Smith. John looks like being in this neck of the woods for a while as his loco "SCHENECTARDY" is awaiting overhaul. Safety Officer Bill Coles was on the prowl looking for anything untoward but the only incident was a child who fell over and grazed his knee.

SASMEE PARK 5"G. STATION

Station attendants Ainsley Cuthbertson & Simon Lindsay dispatched the following trains:-

2-8-0 Nigel Gresley #456	Brian Homann
2-8-0 Nigel Gresley # 457	Rodney Harris
4-6-4 QR tank Blue Baby	Dave Worrel
----- NSW 422 class D/E	Malcolm Ambler
----- Steeplecab electric	Ian Clark
----- J004 Junior	John Monte

Malcolm Amblers 422 class suddenly began to lose power with the problem thought to be emanating from the hand held control unit.

MILLSWOOD STATION 71/4"G

Station attendants Allan Brabham and Alex Mitropoulos dispatched the following trains:-

0-4-0 Dolgoch #2	Craig Dunstan
0-6-0 Simplex	Bert Francis
----- Shay #12	Graeme Dricoll

Jeanette Francis brough Margaret Lee along to view, and also have a ride behind Simplex. -- A fine tribute to the late Frank Lee.

CHARITY DAY AT PENFIELD.

The Penfield Model Engineers deemed that all proceeds from their PFD on Sunday 29th February would go to a special cause. The parents of a very young girl[18months] needed some \$50,000 to send her to the U.S. of A. for specialised cancer treatment, and Penfield was determined to help.

Invertations were sent to kindred clubs with the plea for locos to help out. SASMEE played its part by sending 4 locos.

The days running was advertised from 11am to 4-30pm with plenty of refreshments available. The weather was sunny and warm with a temperature of 25 degrees. The attendance of the public was very good with people coming and going al of the time. The public facilities are excellent with plenty of grassy areas and shady trees. The station is very roomy with 2 tracks available for loading of passengers. Upon leaving the station the

2 tracks converge into 1, with 2 options available, the short journey around the clubhouse or the long trip out in the sticks. With the appropriate setting of the points both journeys may be undertaken. The track is very good with the familiar clicketty-clack through points and cross overs.

Penfield [not unlike SASMEE] is making good use of L.E.D's in signalling apparatus which give brilliant light and are relatively inexpensive.

The locos facilities at Penfield are very spacious with steam up bay tracks at waist height making loco servicing quite comfortable. There are 2 unloading ramps, a turntable and a traverser.

In all there were 15 locos in attendance, 13 x 71/4" & 2 x 5"6. The highlight of the day was the announcement by President Ray Hall that \$3460 had been raised through gate charges, canteen sales and some other activities. A grand effort by Penfield who deserve the heartiest congratulations for helping someone in need.

For the record the SASMEE contingent was as follows:-

4-6-0	Green Pacific #8443	Ian Thomas & David James
0-6-0	Koppel	Bob Nash & Glen Templeman
0-4-0	Dolgoch #2	Barry & Craig Dunstan
-----	Shay #12	Graeme Driscoll & Michael Jeffress

VISIT TO DINKY - DI ENGINEERING

SASMEE was one of several invitees to visit Ian Thomas's factory at Lonsdale on Tuesday 16 March to witness all his plant in full production. Some 80 -- 90 people were broken up into 5 groups and were shown around the factory by members of his staff. Of particular interest to the SASMEE group was the delicate machining of a brass name plate "RENO" for Ian Clark's 71/4"6 4-6-0.

Tea, coffee and biscuits topped off a very informative evening, thoroughly enjoyed by all.

Many thanks to Dinky - Di and staff.

ENTERTAINMENT

The March meeting was entertained, courtesy of Ian Thomas, by a DVD on the Silverton to Durango Narrow Gauge railway. If one was visiting the U.S. of A. this railway with its associated scenery would be a must see.

Ian Clark researched and put together an interesting talk on the "TITANIC" for the April meeting. The talk was augmented by slides showing the construction of this mighty vessel which was certainly an engineering feat in its day. The slide show culminated in many shots taken by Robert Ballard of the wreck, in some 4km of deep water.

Incidentally, in April 2004, Ballard claims he intends to make more dives on the wreck just to see evidence of the deterioration since discovering the vessel 19 years ago.

The May meeting was entertained by Barry Dunstan using a video titled "2002, The Year of steam in Victoria". There were many scenes of WCR R711 in full flight at 115kph and aptly described as "The fastest regular steam hauled passenger train in the world". Sadley, with changes to managerial positions within WCR steam is no longer employed on their trains. It would certainly be a welcome gesture if this policy was reversed some time in the future.

FLYING THE FLAGS

It has been some time since SASMEE has flown the flags on public field days. David Hawkins has kindly consented to attend to this task starting from the 15/5/04 field day.

Many thanks David.

DVD/VCR COMBO

In moving along with the times the executive committee felt that the club would benefit by being able to show digital video discs [DVD] in addition to video cassette recordings [VCR] and accordingly an "L.G." combo was purchased particularly as prices have tumbled recently. The advantage of the combo is that only one handset is required to operate the 2 mediums. The old "Sharpe" VCR was auctioned off at the March meeting to a satisfied member for a modest price.

AUTUMN RUNNING MARCH 2004

For the PDF for Autumn, Sunday 7th March the following locos handled the day well:-

31/2" Gauge

4-6-0 Doris Alan Wallace

5" Gauge

2-8-0 Nigel Gresley #456 Brian Homann

2-8-0 Nigel Gresley #457 Rodney Harris

0-6-0 Speedie Robin Wallace

4-4-0 Virginia Brad Cottle

4-6-4 Blue Baby Dave Worrel

----- Steeplecab Ian Clark

71/4" Gauge

0-4-0 Dolgoch #2 Craig Dunstan

0-6-0 Koppel Glen Templeman

4-6-2 Pacific #8443 Ian Thomas

0-6-0 Simplex Bert Francis

----- Shay #12 Graeme Driscoll

BROKEN RETAINING WALL

The besser block retaining wall opposite the steamhouse was constructed during the mid 1980's, replacing an earlier one.

Over a period of time a nearby tree root has pushed an area of the wall upwards causing it to fracture.

As this wall is due to be made higher by the addition of a fence behind it, it stood to reason that the fractured wall had to be repaired first.

On Wednesday 17th March approximately 10ft was dismantled and re-erected making ample clearance for the tree root to grow and not cause any interference. On Wednesday 24th March erection of the fence began which in effect will prevent anyone sitting on the wall and causing a nuisance. Upon completion the fence was painted bronze olive to match existing surrounds.

CHANGE TO CONSTITUTION

A special meeting was called for prior to the General meeting on 11th May 2004.

The nature of the business, relating to C8, "Elected Officers" had been previously circulated to all members, in which details of

the motion given.

Some 44 members members attended the meeting and voted overwhelmingly for the motion.

EFFICIENCY TRIALS / SAFETY VALVE RUN

Don't forget the above event to be held on Saturday 12th June from approx. 9-30am. Following the evening meal [supplied by SASMEE] a night run is scheduled which promises plenty of fun. Please note that only ticket holders will be served a meal! so be sure to indicate your attendance beforehand.

AUTUMN RUNNING APRIL 2004

What a perfect day we had for the Sunday PFD on 4th April 2004. With 24 degrees and a cloudless sky it does not come any better except, maybe, when there are 50% more 7 1/4" G locos than 5"G. Yes, 6 x 7 1/4" and only 3 x 5" which makes the latter have to work very hard.

Having both been on the sick list it was good to see the Goedeckes back on deck with Eleanor helping out in the canteen and Des at SASMEE Park Station. With some 7 birthday parties scattered around the grounds the canteen staff appeared to have an easy day.

The boat pond, looking very clear played host to sail, steam and mechanical boats operated by Norm Kernick, Dean Deguisto, Bob Smith and Mary and Gerry Turner. Ever vigilant Safety Officer Bill Coles was on the prowl looking for the elusive "thongs" which try and sneak through for a ride, an ever present problem during warmer months.

Although mainly stationed at Roseworthy Phil Waugh's new loco, an 0-6-0 Canadian switcher had its first public run at SASMEE with no apparent problems. Roseworthy members Andrew Mathews and Peter Armstrong were to help Phil with the driving. The loco is appropriately named "E.C.GRUMPY". Phil will be only too happy to impart the origin of the name. For the technically minded specifications of this loco are given in the March 2003 edition of the SASMEE Bulletin.

SASMEE PARK STATION

Station masters Des Goedecke & Michael Tingay dispatched the following:-

Nigel Gresley #456

Brian Homann

QR Tank Blue Baby

Dave Worrel

Steeplecab Electric

Ian Clark

MILLSWOOD STATION

Station attendants Alan Brabham & Alex Mitropoulos dispatched the following:-

Dolgoch #2

Craig Dunstan

Pacific #8443

Ian Thomas

Karalee WAGR "B" class

Les Smith

Simplex

Bert Francis

Switcher E.C.GRUMPY

Andrew Mathews

Shay #12

Graeme Driscoll

APPLIANCE ACCREDITATION

On Wednesday 31st March 2004 member Michael Moyse spent considerable time testing and tagging all electrical cable leads on SASMEE property in order that we fully comply with regulations relating to Duty of Care. Electricians are not easy to come by and SASMEE acknowledges the generous help given by Michael in this regard.

VISITOR

The PFD Saturday 15th May saw a visitor from the Loddon Miniature Steam Railway Society of Bendigo, Vic.

Their Secretary, Alan Craven was in Adelaide for a few days and spent a pleasant afternoon talking to members and taking videos. Alan's son Steven is also President so it is something of a family affair. Interestingly the 2 clubs exchange Magazines, theirs being "THE BLASTPIPE"

AUTUMN RUNNING APRIL 2004

The most unusual thing about the PFD on Saturday 17th April was the sell out crowd, most unusual for a Saturday.

A bright sunny day with 22 degrees, some 7 birthday parties and "Millions" of kids made the best of what we had to offer.

Notwithstanding this, Len Redway safety officer, had no reports

of any misdemeanors.

SASMEE has many visitors of late and today was no exception. We had the pleasure of the company of David Kirkland and his wife Rosemary from the Western District Live Steamers Club in NSW. They had motored to the convention in Bunbury in W.A. and were on their way home when they thought of dropping into SASMEE for a run of their loco. They had checked with our Secretary, Ian Clark and their visiting day coincided with our open day. Doug's loco is a finely crafted model of a NSWGR 73 Class diesel electric and powered by 2 deep cycle batteries carried in the accompanying passenger/driver carrying vehicle. A small 4 wheeled brake van was coupled behind. The whole unit was painted in the authentic colours and looked very nice.

David is their club secretary and after a pow wow with our secretary agreed that the 2 clubs should exchange newsletters. We are always interested in other club happenings.

The better than average saturday crowd was well handled with 7 locos on the 5" track, however with only 2 locos on the 7 1/4" track things were rather hectic. At about 3.45pm Bert Francis added 2 cars to his train and seconded Ian Clark as guard.

SASMEE PARK STATION

Locos were dispatched by Michael Tingay & David Naeser.

4-6-0	3 cylinder Freelance	Glen Templeman
2-8-0	Nigel Gresley #457	Rodney Harris
4-6-4	QR Tank Blue Baby	Dave Worrel
0-6-0	Speedie	Alan Wallace
-----	Steeplecab Electric	John Lewis
-----	Shunter 004 Jack	John Monte
-----	NSW 422 Class D/E	Malcolm Ambler
-----	NSW 73 Class D/E	David Kirkland [WDL5]

MILLSWOOD STATION

Locos were dispatched by Alex Mitropoulos & John Daly.

0-4-0	Dolgoch #2	Barry Dunstan
0-6-0	Simplex	Bert Francis

ON THE SICK LIST

Members were shocked to learn that Alex Mitropoulos suffered a heart attack on Friday 7th May and was taken by ambulance to the Royal Adelaide Hospital where he was admitted for tests. Alex is a valued Wednesday worker and regular station attendant on public field days.

He was able to go home on Thursday 13th May and accordingly the Club President and Secretary paid him a visit on the following day to pass on the well wishes from members.

Looking forward to seeing Alex back on deck real soon.

TRACTION/ROAD VEHICLE SITE

Preliminary work started on Wednesday 14th April with the digging of post holes for continuation of a protection fence to link up with the northern end of the girder bridge by the 5"G track.

A start also has been made on grading the earth in this area and is supported by a low Besser brick wall. This will allow models to venture down on the area behind SASMEE Park Station and adjacent to the 2 rail tracks over the girder bridge.

Erection of chain wire fencing on portion of the old T/E track commenced on Wednesday 5th May and should be completed early June.

A gateway will be inserted in the fence, next to the shelter shed to allow worker access through the area. The running area in this vicinity will be suitably topped with dolomite. Careful thought will have to be given with regard to passage of road vehicles across the rail track at the appropriate gateway, bearing in mind the necessity of safe working of trains. A couple of ideas have been floated however, a definite decision has not been made yet. A new seat for the public has been suitably placed next to the new fence.

AUTUMN RUNNING MAY 2004

The Sunday PFD on 2nd May was a rather layback sort of a day.

A bit of drizzly rain and 17 degrees, a sure sign that winter is fast approaching. Lets face it, winter is not all doom and gloom, some of our best takings have been at this time albeit with a fine day.



PHOTO 1

PHOTO 2

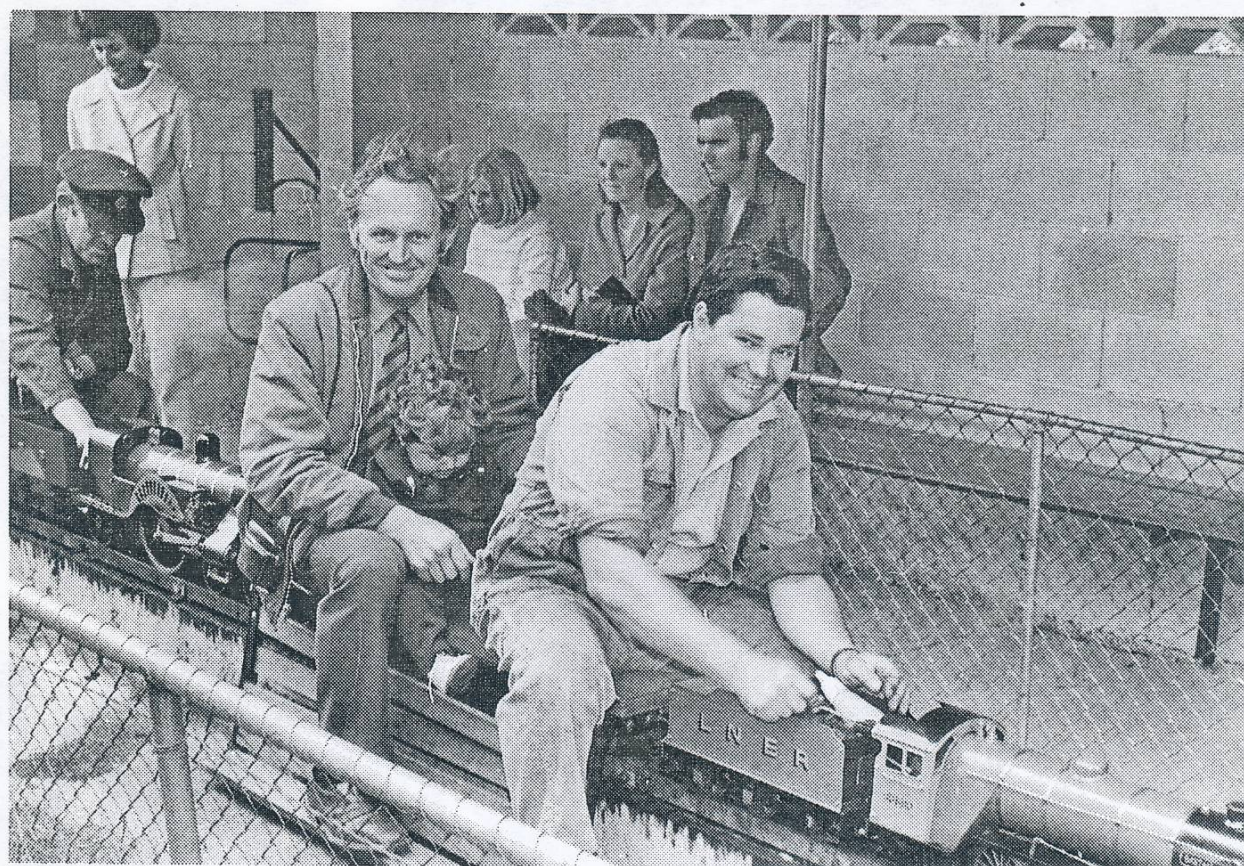




PHOTO 3

PHOTO 4





PHOTO 5

PHOTO 6

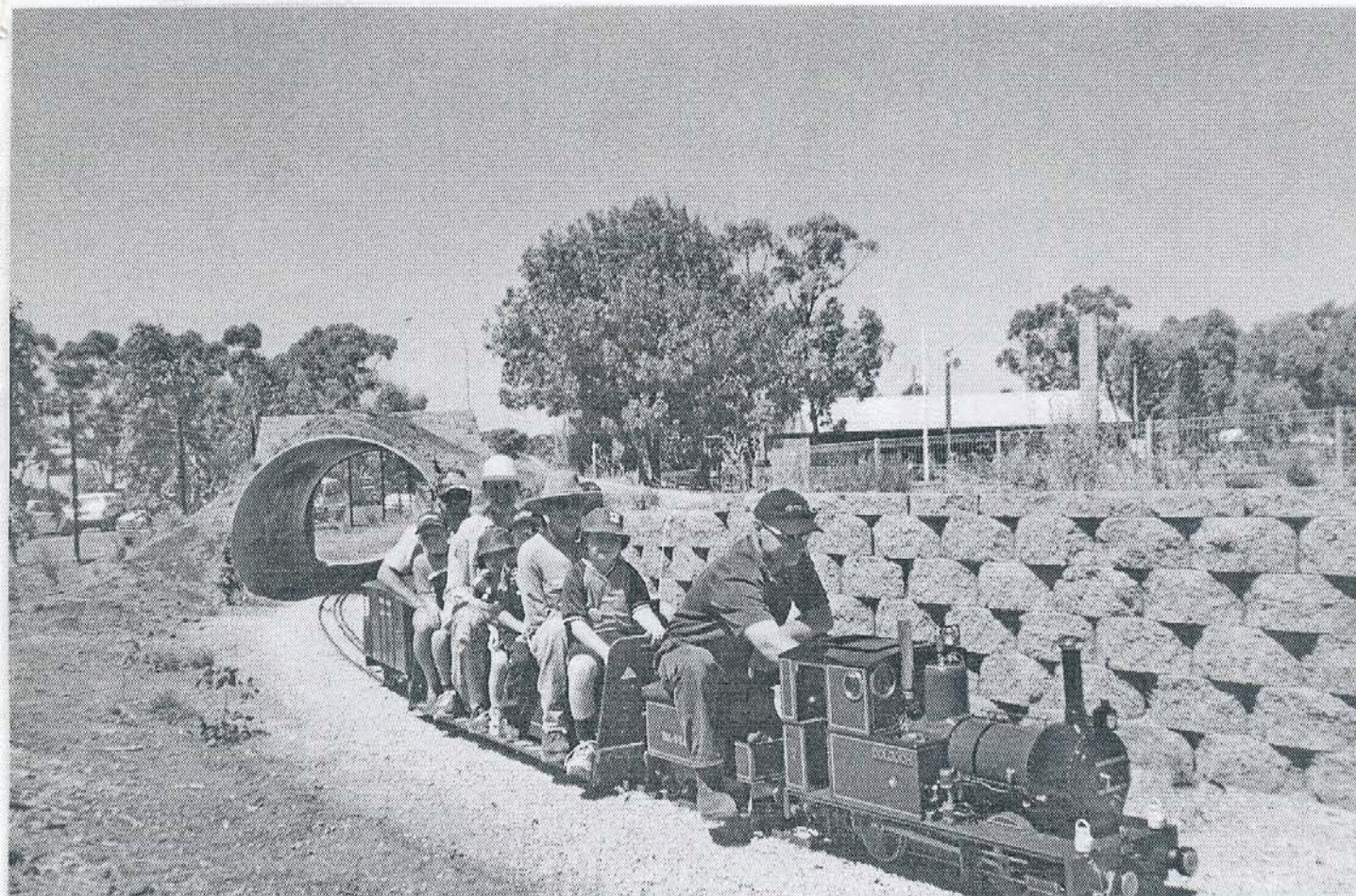
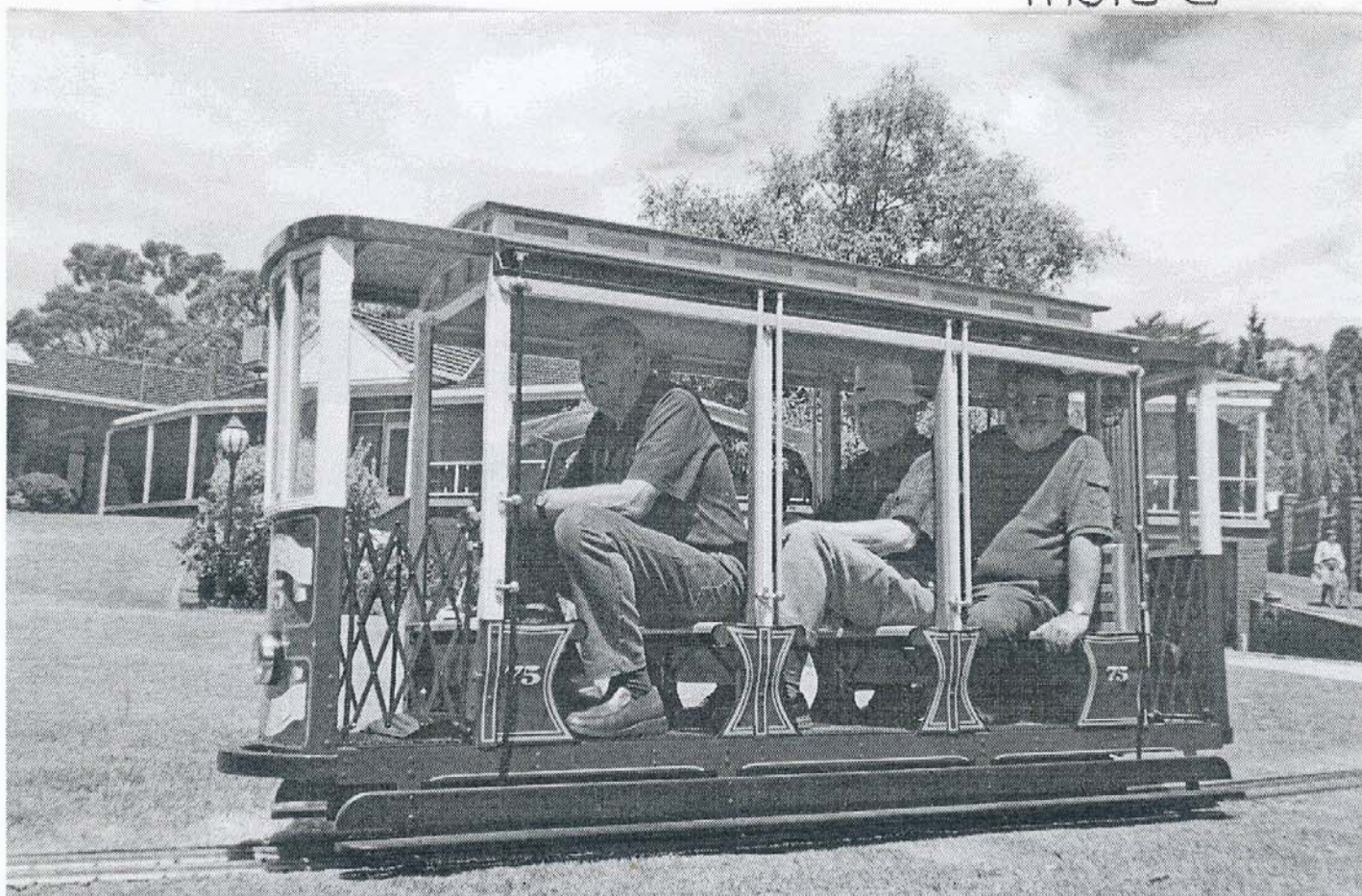




PHOTO 7

PHOTO 8



The highlight of the day would have been Graeme Driscoll's introduction of a new loco, -- a 5"6 articulated Kitson Meyer 0-6 + 6-0. This fine looking machine bears testimony to Graeme's excellent workmanship, and as they say, "the proof of the pudding is in the eating." The loco hauled 2 fully loaded carriages with ease all afternoon. Technical details are given elsewhere in the Bulletin. Photos will follow later.

Only 2 small kiddies birthday parties were noted, however Jack Davey on the gate reported that he was given names of adults attending an adult birthday party --- that's something new! While his loco is undergoing major repairs John Beal has been helping out at SASMEE park station ably assisted on this day by Graham Richards, during his time off from the Moomba Gas Fields.

New member John Daly has been helping Alan Brabham and Elex Mitropoulos at Millswood Station. It is good to see that some of our newer members are willing to lend a hand.

The steam whistle occasionally echoing from the boiler house reminds us that Bob, Colin, and Ralph are still having fun with their refurbished boiler. Being so much more efficient allows for easier operation on the "Big" engine when desired.

The following drivers ran Locos:-

Rodney Harris
Graeme Driscoll
Ian Clark
Bert Francis
Craig Dunstan
Ian Thomas

ANOTHER NEW LOCO

An articulated 0-6 + 6-0 "Kitso Meyer" from the workshop of Graeme Driscoll had its first successful Maiden run on the 5"6 track on the PFD 2/0/04.

The unit is carried on the 2 almost identical sets of bogies.

Wheel Diam. 4 3/8" [111mm]
Walschaerts Valve Gear, slide valves
Cylinders.[4] 1 1/2"Diam. [38.1mm]

Stoke. 2 1/4" [57.2mm]

Boiler, copper, 7 1/4"Diam. x 26" long & silversoldered

Tubes. 14 off x 5/8"Diam x17" long.

Flues. 2off x 1"Diam.

Elements. 3/8" Diam. of stainless steel.

Grate. 8 3/4" x 43/4" [area approx 41 sq. inches.]

Loco lenth 4' 3" [1300mm]

Width. 13 3/4"[350mm]

Height. 20"[510mm]

Boiler feed. Donkey pump, 2 injectors. plus hand pump.

Boiler pressure. 100psi Fuel. Char

Livery. Green.

Time to build. 2 years.

The concept of the 2 articulated drive bogies is basically the "Simplex" design and has turned into an exceptionally fine looking working model. Congratulations Graeme.

SOME SAMEE HISTORY

November 18th 1950:-

- SASMEE President and Secretary received invitation to Government House Garden Party.

November 1977:-

- The general meeting passed a motion, in the spirit of compromise, to include 7 1/4"G in the 5"G proposal for a ground level track which was first mooted in February 1972. The rail division of the State Transport Authority [STA] has agreed to allow the Western Boundry to be re-aligned outside of its original position.

December 1977 :-

- Nearly 100 people attended the SASMEE xmas BBQ. [still very popular today!---ed]
- Peter Denholm joined SASMEE.
- The loco roster for PFD 17/12/77 was, Ralph Skewes, Ian Clark, John Barks, Keith Besley and Bob Smith.
- The canteen roster for the same day was Len Peckham and Don Osborne.

November 1977:-

- Colin Cook joined SASMEE. [now A life member]

November 2nd 1992:-

- Began dismantle of the elevated track for placement on the ground. Operation was completed in less than the 3 weeks allocated. No PFD`s were lost. [see photos elsewhere in this edition of the Bulletin].

RAILWAY QUIZ

- Q. During the second world war, because of our involvement with Japan, what was the alternative name given to the 2-8-2 "MIKADO" Class locomotives?

Answer in next Bulletin.

Answer to Quiz. --- Last Bulletin.

- Q. What was Hendon Railway Station named after?

A. The famous wartime airfield at Hendon, England.

VISITORS

On Saturday 3rd April, whilst preparing for the next day`s PFD we were paid a visit by some travellers from Sussex in the U.K. They were Oliver and Gillian Keef together with a relative, Frank Angus, who lives in Adelaide. They were very impressed with our trackwork and associated circuitry and took many photos and notes. They were disappointed that in flying out the next day they would not be able to see SASMEE in action.

However some other visitors enjoyed their visit on the Sunday PFD. Graham Kirby and partner Gail McCoy, of the Sydney Live Steam Society [SLSLs] of West Ryde, were on their way to the AALS Convention in Bunbury WA and could not resist the opportunity of calling in on our open day.

Also visiting Adelaide was Martin Cleeve from the Midland Railway Trust in Derby, England, who have some 14 full size steam locos and 20 diesels. He was also impressed with SASMEE particularly the signalling system.

GUESS WHO ???? [photos]

How good was your perception of what people looked like some 33 years ago?

Photo No 1 The small boy standing next to the birthday cake is a young Ian Thomas. Older Members will recognize the other three gentlemen as Tom England, Harry Pearce and Bob Brown.

The lady holding the cake is thought to be Mrs Gristi, the Presidents wife.

Photo No 2 The smiling driver of the "Bantam Cock" is none other than Dean Deguisto who nowadays runs boats on the pond. His passenger is Harold Clisby.

[Photos above from SASMEE archives]

Photo No 3 Workers take a break during the demolition of the elevated track in SASMEE Park Station, on 2/11/92

Photo No 4 Demolishing the old elevated track 2/11/92, at the site of the of the Golden Spike Ceremony on 11/4/04.

[Photos above from SASMEE archives.]

Photo No 5 The Wednesday group gather for the Golden Spike Ceremony on 11/4/04 upon the track completion which took 4 1/4 years.

Photo No 6 "DOLGOCH" from SASMEE was one of the many running at Penfield Model Engineers on 29/2/04 to aid a special charity day.

Photo No 7 The latest loco from Bert Francis, a 7 1/4"G. 0-6-0 named "Simplex". taken PFD 7/3/04

Photo No 8 Jack Davey Driving Bob Nash`s 7 1/4"G tram during a special day at Bob`s place on 31/1/04.

Passengers, Ian Clark & Dean Deguisto.

[Photos 3 to 8 inclusive taken by Barry Dunstan]

MILLSWOOD STATION SIGNALLING

The upgrading of signals protecting Millswood station and the station precincts is progressing with the installation of two signals at the "Main-Yard" points.

The "Main" signal displays three aspects : Red, Yellow & Green.

The "Yard Call-On" signal displays a single aspect : Yellow (flashing).

When the "Main-Yard" points are set for the Yard the "Yard" signal displays a flashing Yellow aspect and the "Main" signal is locked to the Red aspect.

When the "Main-Yard" points are set for the Main line loop, the "Yard Call-On" signal is extinguished and the "main" signal will indicate one of three aspects :-.

(1) If the Main line loop is unoccupied the "Main" signal will display a Green aspect if the signal at the "Station Exit" points displays a Green aspect.

(2) If the Main line loop is occupied the "Main" signal will display a Red aspect which is will be designated "Absolute ".

(3) If the signal at the "Station Exit" points is locked to a Red aspect ,due to a train departing Millswood station , the "Main" signal at the "Main -Yard" points, will display a a Yellow aspect .

All signals are controlled via low voltage, continuous track circuits and are interlocked with the movement of points where applicable.

I. O. Clark

I. O. Clark

Assistant Signal & Telegraph Engineer

EDITOR'S PAGE OF "THINGS"

MOST URGENT REQUEST

During the course of the most recent SASMEE auction night, [October 2003] a wooden box [branded EMF] was auctioned off. The box contained a random selection of machine cut change wheel gears.

These items were initially provided by club member John Levers for the auction. John has now embarked on a model project which calls for number of gear wheels of the type in which he initially supplied for auction.

John is **most anxious** to make contact with the club member who purchased these items in the hope of "buying back" a number of the gears that will satisfy John's needs.

It would be appreciated if the member who made the purchase initially contact Bill Coles so arrangements can be made to set up some form of communication with John.

Your attention to this matter is appreciated.

Moral of the story, **Never** clean out your shed, regardless of what the wife says ----- Ed.

MORE ON THE ROAD VEHICLE TRACK.

The track is taking shape, with a generous amount of work by the Wednesday group, and expenses provided from Club revenue.

There has been a lot of discussion of the need to support all the motive power in the club, that's why the track is being built.

We all recognize that SASMEE is strapped for room, hence the space allotted to the track is best being made use of. There has already been some good constructive discussion with the

"Trackbuilders" and those that currently own/run road vehicles.

However, before the track reaches its final stage those

members who are currently making, thinking about making, or just dreaming about a road vehicle should pay a visit to the track site, or at least be aware of the track layout in detail, example, turning circles, gradients, widths of openings etc. It would be of benefit for future directions.

When its finished it needs to be used. Make sure your Model "Fits"!

Based on our current understanding of the Work Place Safety Act it may be one of few places you will be able to run your vehicle knowing you are covered by insurance. -- Ed

CAST IRON PISTON RINGS

Article by Bill Coles --- Ed.

I am at the stage of making piston rings for the BR2. A total of 18 for the model plus spares, plus a few for breakages. All up around 36 required. The rings will be of cast iron, section 1mm square by 33mm diam. Having made piston rings for 2 locos plus the truck I thought a brief explanation on how one goes about it may be interesting. I might add that Viton "O" rings are really the way to go for locos for ease of manufacture and fitting plus long effective sealing, I chose CI for the BR2 because thats whats in the original.

I machine up a stick of C I to the same size OD as the bore of the cylinder. [strive for best off tool finish.] Bore out to the size required to finish up with the desired wall section. [In my case 1mm walls.]

Part off each section to the required thickness [1mm] I will target for a width of 0.001/2" narrower than the ring grooves already in the pistons. The rings must then be gapped. To do this I use a "Junior" hacksaw frame and blade, with the set on the blade teeth ground off. This gives you a pretty thin cut. I cut the ring at an angle of around 45 degrees which provides a gas check. Carefully deburr the cut. Next the rings will require heat treatment.

Preparation for heat treatment requires the ring to be opened up and held in this position during the heat treating process.

I have used past documented data to arrive at the "Gap". [prior to heat treating] In the case of the small section rings I will be dealing with I will try a gap of 3 times the radial depth, eg 3mm. [A gap of 4 times the radial depth is a good rule of thumb.]

Turn up 2 plates, a 1/4" in diam larger in diam. than the rings, with a center hole to take a convenient clamp bolt. On one of the plates machine a spigot a bit less than the inside diam. of the

rings and 0.250" less in height than the combined thickness of say 4 rings so you can achieve a clamping effect.

[In this case I will be heat treating 4 rings at a time.] For convenience I will make and fit a 3mm square dowel and fit it along side the previously turned spigot in the plate. Place the rings on the plate, opening up the gap to locate on the 3mm dowel. [Take care with this operation, you don't want to distort the ring]

Clamp the 2 plates together with the bolt.

To avoid scaling of the rings during heating it is necessary to seal the outside of the ring plates. The aim here is to prevent oxidisation and therefore discolouration and scaling of the rings during the heat treatment cycle. I shall be using fire clay solution worked well into the ring area.

The actual heat treatment requires heating up, and holding a temperature of some 800 degrees for some 15 minutes. I have found heating the mass to a colour of bright red, but not allowing the colour to go to orange, [higher temp] holding for a minimum of 10 minutes at temperature and then allowing the mass to cool down slowly to room temperature.

When you open the plates, and separate the rings you should find "springy" rings. I will lightly polish the rings with oiled fine wet & dry, paying some attention to the removal of any "wire edges" that may scratch the cylinder bores.

All being well the rings should fit very snugly in the bores, with a minimal gap. Care is required in fitting the rings over the piston, [that's where your spares could come in handy].

Remember to fit the ring gaps at 180 degrees to reduce gas leakage.

I don't claim any originality for the above process, there has a number of articles printed in magazines. The article by John Tulloch [can't remember the magazine it came from] quotes the following proportions:-

Circumferential Thickness-- $T = \text{Bore divided by } 25.$

Thickness [Width] of the ring---- $T = W$

Ring Gap prior to H/T----- $G = T \times 4.$

GRINDING WHEEL INFORMATION

article by Bill Coles

The following information was taken from a Norton Handbook on Tool Room Grinding.

The chart reproduced below [sorry its a bit on the small side] is typical of the markings one sees on the side papers of grinding wheels.

If we are going to spend money on a new wheel it would be in our best interests to purchase a wheel to suit our purposes.

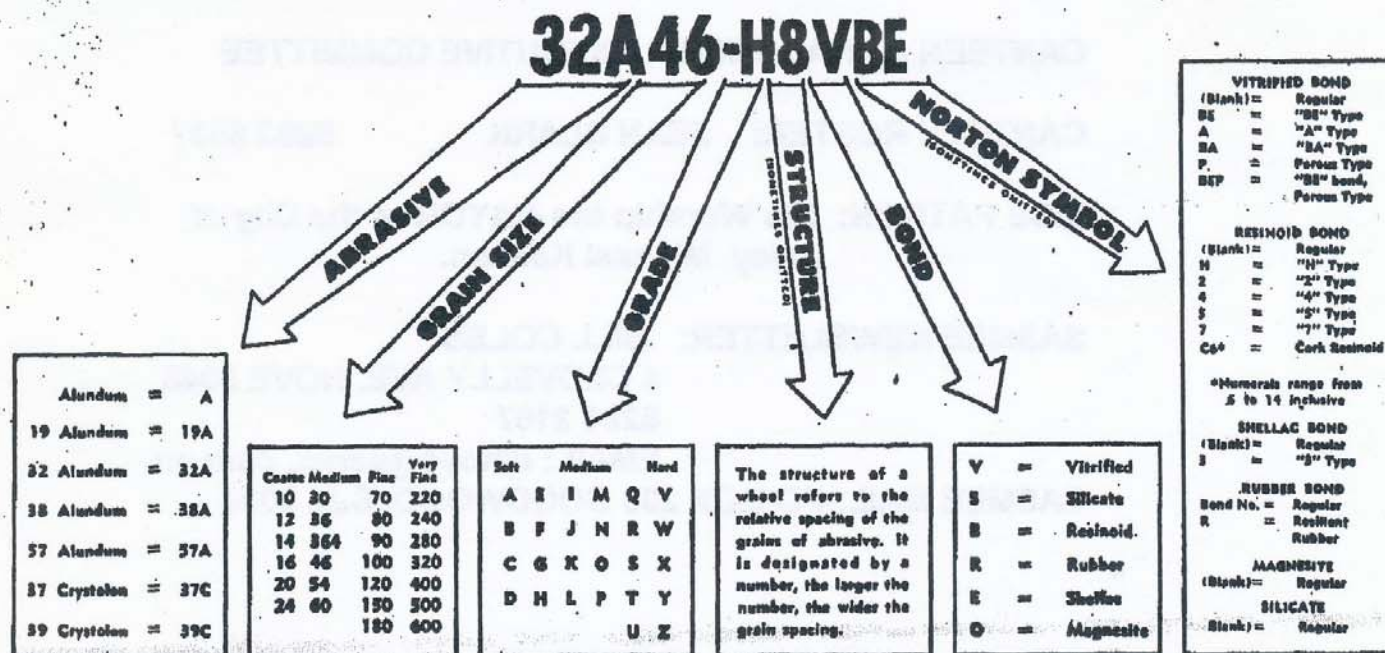
The wheel makings illustrated are a wheel recommended for dry surface grinding of hardened die steel.

Not the sort of job we usually do in our sheds.

The wheel specification more likely to suit our class of work, in this case, sharpening lathe tools in high speed steel, offhand grinding using a bench grinder, would be:- Coarse wheel, 57A36--05VBE

Fine wheel. 57A60--M5VBE

THIS IS A TYPICAL
NORTON GRINDING WHEEL MARKING



S. A. S. M. .E. E. OFFICE BEARERS
2003----- 2004

PRESIDENT: BARRY DUNSTAN 8248 4843
VICE PRESIDENT: GLEN TEMPLEMAN 8338 0380
SECRETARY: IAN CLARK 8293 6537
EMAIL ijclark@senet.com.au

MINUTE SECRETARY: JEFF SCHAEFER 8298 6927
TREASURER: PHIL WAUGH 8242 1237
ASS. TREASURER" JOHN LEWIS 8297 2581

COMMITTEE: GRAEME DRISCOLL 8276 9387
BILL COLES 8296 2167
JOHN DAVEY 8296 9879
JOHN BEAL 8297 2314

AUDITORS: JOHN DAVEY
GRAHAM GAETJENS

LIBRARIANS: JOHN DAVEY
BILL COLES

BOILER INSPECTORS: ALAN BRABHAM 8362 1279
JOHN GORDON 8398 2035
BILL COLES 8296 2167
JOHN LEVERS 8569 2842

CANTEEN MANAGEMENT: EXECUTIVE COMMITTEE

CANTEEN ROSTER: JEAN CLARK 8293 6537

VICE PATRON: His Worship the MAYOR of the City of
Unley, Michael Keenan.

SASMEE NEWSLETTER: BILL COLES
4 CLOVELLY AVE. HOVE 5048
8296 2167
EMAIL: bjhove@senet.com.au

SASMEE MAIL: PO BOX 208 GOODWOOD, S.A. 5034